

User Manual



NF1002 - NF1004 - NF2000

Conventional / Addressable
Microprocessor-Based Fire Panels

090040787



NF1002 - Declaration of Performance 0051 - CPR - xxxx

NF1004 - Declaration of Performance 0051 - CPR - xxxx

NF2000 - Declaration of Performance 0051 - CPR - xxxx

Reference regulations EN54-2 and EN54-4

NITTAN

FOREWORD

FOR THE INSTALLER:

Please follow carefully the specifications relative to electric and security systems realization further to the manufacturer's prescriptions indicated in the manual provided.

Provide the user the necessary indication for use and system's limitations, specifying that there exist precise specifications and different safety performances levels that should be proportioned to the user needs. Have the user view the directions indicated in this document.

FOR THE USER:

Periodically check carefully the system functionality making sure all enabling and disabling operations were made correctly.

Have skilled personnel make the periodic system's maintenance. Contact the installer to verify correct system operation in case its conditions have changed (e.g.: variations in the areas to protect due to extension, change of the access modes, etc...)

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This device has been projected, assembled and tested with the maximum care, adopting control procedures in accordance with the laws in force. The full correspondence to the functional characteristics is given exclusively when it is used for the purpose it was projected for, which is as follows:

Conventional / Addressable Microprocessor-Based Fire Panels

Panels components have been selected for the purpose intended and they operate according to the technical specifications indicated when the environment conditions outside the panel case correspond to 3K5 class of EN60721-3-3 standard.

Any use other than the one mentioned above has not been forecasted and therefore it is not possible to guarantee the correct functioning of the device. Similarly, any other use of this technical manual other than the one it has been compiled for - that is: to illustrate the devices technical features and operating mode - is expressly prohibited.

The manufacturing process is carefully controlled in order to prevent defaults and bad functioning. Nevertheless, an extremely low percentage of the components used is subjected to faults just as any other electronic or mechanic product. As this item is meant to protect both property and people, we invite the user to proportion the level of protection that the system offers to the actual risk (also taking into account the possibility that the system was operated in a degraded manner because of faults and the like), as well reminding that there are precise laws for the design and assemblage of the systems destined to these kind of applications.

The system's operator is hereby advised to see regularly to the periodic maintenance of the system, at least in accordance with the provisions of current legislation, as well as to carry out checks on the correct running of said system on as regular a basis as the risk involved requires, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. The user must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.

Design, installation and servicing of systems which include this product, should be made by skilled staff with the necessary knowledge to operate in safe conditions in order to prevent accidents. These systems' installation must be made in accordance with the laws in force. Some equipment's inner parts are connected to electric main and therefore electrocution may occur if servicing was made before switching off the main and emergency power. Some products incorporate rechargeable or non rechargeable batteries as emergency power supply. Their wrong connection may damage the product, properties and the operator's safety (burst and fire).

1. GENERALS

The conventional fire detection panels, NF1002, NF1004 and NF2000, belong to a new family of single micro-processor-based control units, able to manage (respectively):

- **NF1002 - 2 conventional zones + MCP (call points line)**
- **NF1004 - 4 conventional zones + MCP (call points line)**
- **NF2000 - 12 conventional zones + MCP (call points line) + 1 analogue-addressable LOOP**

The handy graphic display shows the operating status of the panels at any moment, and in case of anomaly or alarm events, the display back-light changes its color, displaying and highlighting its status.

A series of keys and LED indicators on the front panel allows an easy reading and fast intervention when panel status control or modification of the parameters become necessary.

Main features of NF2000 series fire panels:

- **2 / 4 / 12 zones, each one consisting of:**
- **1 input for conventional sensor with 4K7 ohm balance resistance**
- **1 line settable as:**
 - **open collector output**
 - **input with pull-up for connection to a device with open-collector output**
 - **balanced input**
 - **4 - 20mA input**
- **1 MCP zone, for call points with 4K7 ohm balance resistance**
- **1 Analogue Addressable Loop, NFEXP20, connection of up to 254 addressable devices (for NF2000 model only)**
- **1 alarm balanced supervised output (AL. REL.), protected by PTC**
- **1 RELAY NO/C/NC output for fault alert (FAULT)**
- **1 RELAY NO/C/NC output for pre alarm alert (PRE AL.)**
- **2 RELAY NO/C/NC outputs, settable, (AUX1 and AUX2)**
- **Acoustic alert with internal buzzer for alarm, pre-alarm and fault**
- **1 x 24VDC output for users, protected by PTC (OUT +24V)**
- **1 x 24VDC resettable output for users, protected by PTC (+24V RES.)**
- **Power supply system with control of battery charge and charge failure**
- **AL2SW24 - 29VDC / 2A internal power supply unit**
- **User interface with multi-color backlit graphic display, keypad and LED indicators**
- **Preset for the connection of :**
 - **MDGSME GSM module (optional)**
 - **NFREL24 relay board (optional)**
 - **EXTING extinguishing module (optional)**
- **1 USB connector**
- **Clock for management of event log (event log up to 2000 entries)**
- **Temperature control of the two optional internal batteries (NTC1 and NTC2)**

Compliance with (UNI) EN 54-2:2007, (UNI) EN 54-4:2007, (UNI) EN 54-21:2006 (in case of GSM dialler installation.)

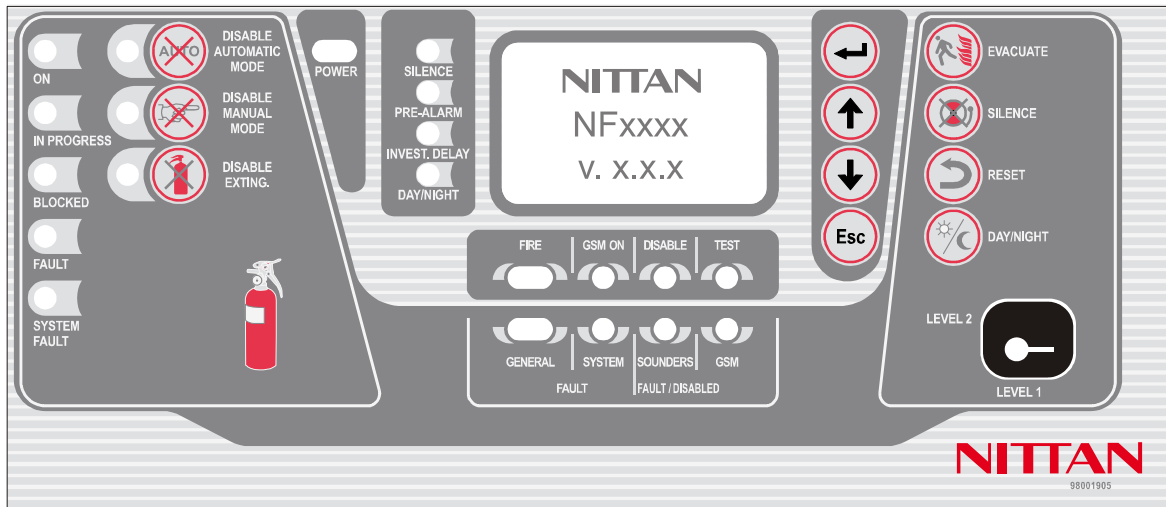
The NF2000 series fire panels have a special performance certificate indicated on the cover of this manual.

PARTS SUPPLIED
<ul style="list-style-type: none"> - AL2SW24 power supply unit - Bracket and screws to fix power supply unit - 2 x 47KOhm + 2 x 4K7 Ohm for NF1002 panel only - 4x47KOhm + 6x4K7 Ohm for NF1004 and NF2000 panels - Technical and programming manual - User manual - CD-Rom with documentation and configuration software

OPTIONAL FUNCTIONS
<ul style="list-style-type: none"> - Output for fire devices (GSM, Sounders) - Outputs delay (DAY / NIGHT mode) - Fault signal from points (NF2000 only) - Correlation of alarm signals (Type A and B detection check) - Unavailability of addressable points (Disables - devices, output modules, acoustic devices - NF2000 only) - TEST condition (Test zones, outputs, loop outputs, loop sounders, display, LED, buzzer)

2. PANEL DISPLAYS AND KEYS

Below is the front label; all functions and states of the control panels are shown by and managed using the graphic display and they are indicated by coloured LED indicators. The control keys of the many panel functions make panel control and programming operations extremely easy and user-friendly.

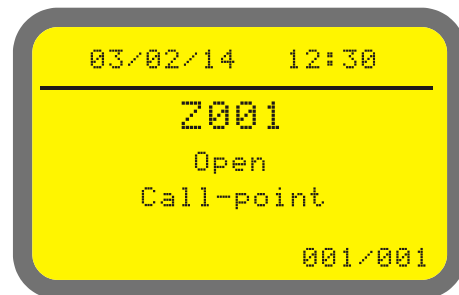


One of the features of the new graphic display is the option of changing the backlighting colour according to the status of the control unit. During normal operation, the display backlight will be GREEN, YELLOW in case of fault or anomaly, RED in case of alarm events. When the control unit is being programmed or set, the backlight will be WHITE.

**Normal operation mode
GREEN**



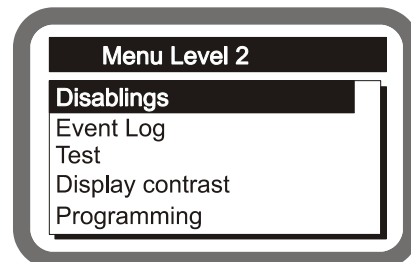
**Alert for anomaly or wrong connection
YELLOW**



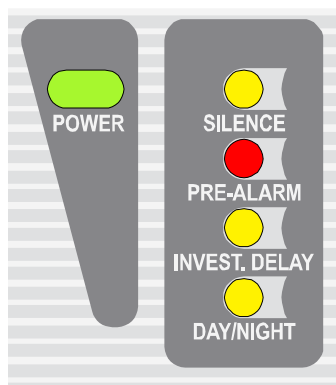
**Alarm alert
RED**



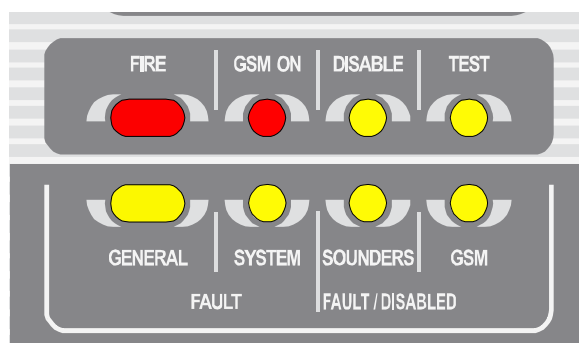
**Setup mode
WHITE**



2.1 Panel LED indicators

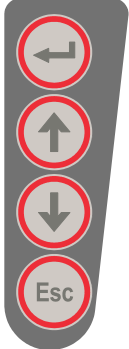



LED name	Colour	Indication
POWER	GREEN	230V Power
SILENCE	YELLOW	Acoustic devices silenced
PRE-ALARM	RED	Alarm check + pre-alarm ON
INVEST. DELAY	YELLOW	Acknowledgment timer or Investigation timer active
DAY / NIGHT	YELLOW	Day / Night mode

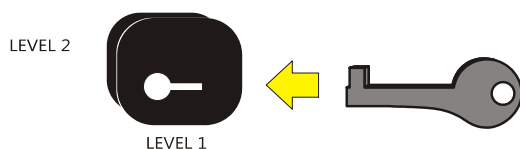


LED name	Colour	Fixed Light	Blinking
FIRE	RED	Alarm event(s) ON with silenced sounder	Alarm events ON
GSM ON	RED	Telephone dialler ON	Waiting a confirm
DISABLE	YELLOW	Disabled elements	----
TEST	YELLOW	System element(s) is / are being tested	----
GENERAL FAULT	YELLOW	Fault events ON with silenced buzzer	Fault events ON
SYSTEM FAULT	YELLOW	CPU fault with silenced buzzer	----
SOUNDERS FAULT / DISABLED	YELLOW	Sounders disabled	Sounders fault
GSM FAULT / DISABLED	YELLOW	GSM disabled	GSM fault

2.2 Panel function keys

	Level 1 Function	Level 2 Function	Level 3 Function
	----	Enters the selected menu / Confirms data	Enters the selected menu / Confirms data
	Scrolls events UP	Moves the selection upwards	Moves the selection upwards
	Scrolls events DOWN	Moves the selection downwards	Moves the selection downwards
	Displays fault events, if at the same time alarm events are present	Returns to previous menu / Delete operation	Returns to previous menu / Deletes operation

	Key name	Level 1 Function	Level 2 / 3 Function
	EVACUATE	During panel acknowledgment or investigation time it resets panel delay time intervals and sets the panel to alarm condition	During panel idle status, it generates an "evacuate" event and sets the panel to alarm condition. During panel acknowledgment or investigation time it operates as seen at level 1. At level 3 the key is disabled.
	SILENCE	Silences the buzzer	During panel alarm or fault condition, it silences acoustic devices. If pressed again, it re-activates such devices. During Day/Night mode acknowledgment time it sets the panel to investigation mode
	RESET	----	During panel alarm or fault condition, it resets the panel.
	DAY / NIGHT	----	It enables / disables day/night mode. At level 3 the key is disabled.



To access LEVEL 2:
insert the special key supplied with the fire panel into the level selector and rotate it: you will switch from LEVEL 1 to LEVEL 2.

To access LEVEL 3:
once at level 2, scroll the menu and insert a PASSWORD for the PROGRAMMING section.

WARNING

To restore the alarm viewing, you must access to the Level 2 by turning the key and pressing the ESC button.

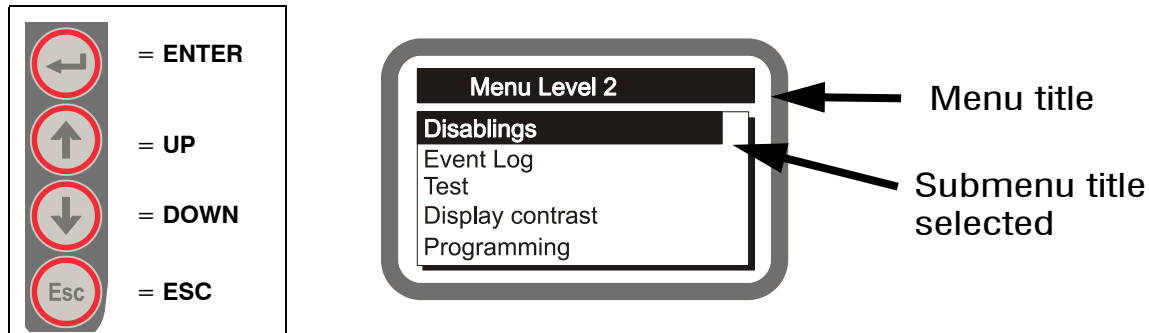
3. LEVEL 2 MENU

To access LEVEL 2 menu, insert the key supplied with the panel into the plastic lock on the front of the fire panel housing then turn it and set it to LEVEL 2 position.

Display backlight will turn white and LEVEL 2 menu will be displayed as per following image.

Use ▲, ▼, ENTER and ESC keys to browse Level 2 Menu.

Level 2 menu starting display:



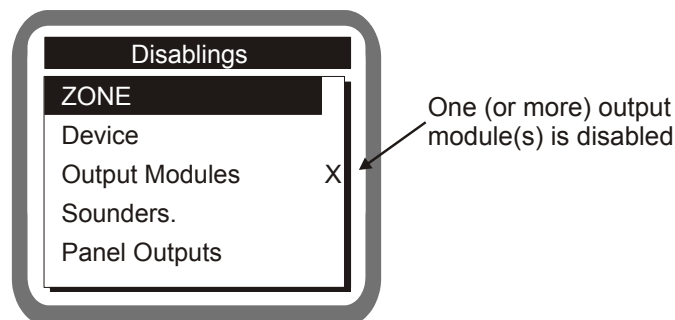
3.1 Disablings

This menu displays lists of zones, devices, and modules that can be disabled, their current status and items already disabled.

The display below is typical of this menu.

When on the right of an item the "x" symbol appears, it indicates that one (or more) of such item(s) is disabled (see *Output Modules* in the example.)

For more details on the item(s) disabled, please enter the relevant submenu using the **arrows** and **ENTER** key.



Disablments - ZONE

Go to **LEVEL 2 MENU > DISABLEMENTS > ZONE**

- A list of zones will display (zones displayed depends on panel model and setup)
- Use ▲ (UP) and ▼ (DOWN) keys to select the zone(s) to disable.
- To disable the zone selected press **ENTER** (an 'X' will appear on the right).
- To re-enable the zone, press **ENTER** again (the 'X' on the right will disappear).
- To go back to **LEVEL 2 MENU**, press **ESC** twice.

NOTE: when all the addressed devices connected to the same zone are disabled, such ZONE will appear as disabled in the menu above ("x" symbol on the right.) When such zone is re-enabled, all the addressed devices connected to such zone will be re-enabled.

Disablesments - DEVICE (enabled if NFEXP20 - LOOP module is installed)

Go to **LEVEL 2 MENU > DISABLEMENTS > DEVICE**

- A list of the addresses of the self-learnt devices will be displayed.
- Use **▲ (UP)** and **▼ (DOWN)** keys to select the device (address) to disable.
- To disable the device selected press **ENTER** (an 'X' will appear on the right).
- To re-enable the device, press **ENTER** again (the 'X' on the right will disappear).
- To go back to **LEVEL 2 MENU**, press **ESC** twice.

Disablesments - OUTPUT MODULES (enabled if NFEXP20 - LOOP module is installed)

Go to **LEVEL 2 MENU > DISABLEMENTS > OUTPUT MODULES**

- A list of the addresses of the output modules will be displayed.
- Use **▲ (UP)** and **▼ (DOWN)** keys to select the module (address) to disable.
- To disable the module selected press **ENTER** (an 'X' will appear on the right).
- To re-enable the module, press **ENTER** again (the 'X' on the right will disappear).
- To go back to **LEVEL 2 MENU**, press **ESC** twice.

Disablesments - SOUNDERS (enabled if NFEXP20 - LOOP module is installed)

Go to **LEVEL 2 MENU > DISABLEMENTS > SOUNDERS**

- A list of the addresses of the sounders will be displayed.
- Use **▲ (UP)** and **▼ (DOWN)** keys to select the sounder (address) to disable.
- To disable the sounder selected press **ENTER** (an 'X' will appear on the right).
- To re-enable the sounder, press **ENTER** again (the 'X' on the right will disappear).
- To go back to **LEVEL 2 MENU**, press **ESC** twice.

Disablesments - PANEL OUTPUTS

Go to **LEVEL 2 MENU > DISABLEMENTS > PANEL OUTPUTS**

- The list of ZONES, AUX1 and AUX2 outputs, and SOUNDERS output will be displayed.
- Use **▲ (UP)** and **▼ (DOWN)** keys to select the output to disable.
- To disable the output selected press **ENTER** (an 'X' will appear on the right).
- To re-enable the output, press **ENTER** again (the 'X' on the right will disappear).
- To go back to **LEVEL 2 MENU**, press **ESC** twice.

Disablesments - EXTINGUISHING MODULE

Go to **LEVEL 2 MENU > DISABLEMENTS > EXTINGUISHING MODULE**

- To disable the extinguishing module press **ENTER** (an 'X' will appear on the right).
- To re-enable the extinguishing module, press **ENTER** again (the 'X' on the right will disappear).
- To go back to **LEVEL 2 MENU**, press **ESC** twice.

Disablesments - GSM

Go to **LEVEL 2 MENU > DISABLEMENTS > GSM**

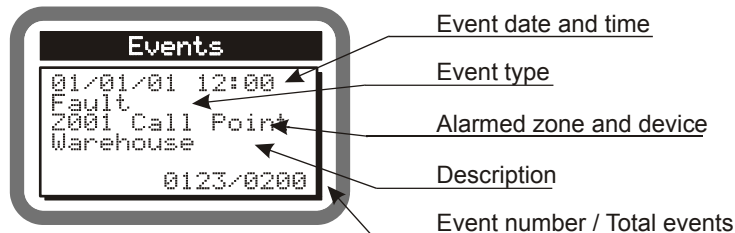
- To disable the GSM module, press **ENTER** (an 'X' will appear on the right).
- To re-enable the GSM module, press **ENTER** again (the 'X' on the right will disappear).

- To go back to **LEVEL 2 MENU**, press **ESC** twice.

3.2 Events

Go to **LEVEL 2 MENU > DISABLEMENTS > EVENTS**

- The panel events log will be displayed.
- Use **▲ (UP)** and **▼ (DOWN)** keys to browse panel events.
- To go back to **LEVEL 2 MENU**, press **ESC** key.



3.3 Devices (with NFEXP20 -LOOP installed)

Go to **LEVEL 2 MENU > DEVICES**

- The display will show the address of the first devices self-learn to the loop.
- Use **▲ (UP)** and **▼ (DOWN)** keys to browse registered addresses.
- Press **ENTER** to display the type of device connected to the address in use.
- Use **▲ (UP)** and **▼ (DOWN)** keys to browse memorized devices and display their:
Address - Type - Description - Zone - Group (if present)
- To exit press **ESC** key.

3.4 Test

This menu allows to test panel outputs and zones.

Test - ZONES

Go to **LEVEL 2 MENU > TEST > ZONES**

- The list of zones will be displayed (zones will be displayed according to panel model and setup.)
- Use **▲ (UP)** and **▼ (DOWN)** keys to select the zone to be tested.
- To start testing the zone selected, press **ENTER** (an 'X' will appear on the right).
Now the zone has to be alarmed by triggering a detector or the zone emergency call point. The panel will trigger AL.REL. alarm output signalling the detection of the sensor or the call point; it will disable the output after 10 seconds.
- To stop testing this zone, press **ENTER** again (the 'X' on the right will disappear).

Test - OUTPUTS

Go to **LEVEL 2 MENU > TEST > OUTPUTS**

- Use **▲ (UP)** and **▼ (DOWN)** keys to select **SOUNDER** option.
- To enable **SOUNDER** (or **AL.REL.**) output, press **ENTER** (an 'X' will appear on the right).
- To disable the output, press **ENTER** again (the 'X' on the right will disappear).

- Use ▲ (UP) and ▼ (DOWN) keys to select **ZONE 1** (valid for all zones connected).
 - To enable ZONE 1 output, press **ENTER** (an 'X' will appear on the right).
 - To disable the output, press **ENTER** again (the 'X' on the right will disappear).
- [OUTPUTS are: relay outputs of optional NFREL24 board + digital outputs of panel I/O terminals, if setup]

- Use ▲ (UP) and ▼ (DOWN) keys to select **FAULT** option.
- To enable FAULT output, press **ENTER** (an 'X' will appear on the right).
- To disable the output, press **ENTER** again (the 'X' on the right will disappear).

- Use ▲ (UP) and ▼ (DOWN) keys to select **AUX 1** option.
- To enable AUX 1 relay, press **ENTER** (an 'X' will appear on the right).
- To disable the relay, press **ENTER** again (the 'X' on the right will disappear).

- Use ▲ (UP) and ▼ (DOWN) keys to select **AUX 2** option.
- To enable AUX 2 relay, press **ENTER** (an 'X' will appear on the right).
- To disable the relay, press **ENTER** again (the 'X' on the right will disappear).

Test - LOOP OUTPUTS (with NFEXP20 -LOOP installed)

Go to **LEVEL 2 MENU > TEST > LOOP OUTPUTS**

- The list of addresses of output modules self-learned to the loop will be displayed.
- Use ▲ (UP) and ▼ (DOWN) keys to select the address of the output to be tested.
- To enable the selected output, press **ENTER** (an 'X' will appear on the right).
- To disable the output, press **ENTER** again (the 'X' on the right will disappear).
- To exit test mode and go back to TEST menu press ESC key.

Test - LOOP SOUNDER (with NFEXP20 -LOOP installed)

Go to **LEVEL 2 MENU > TEST > LOOP SOUNDERS**

- The list of addresses of SOUNDERS modules self-learned to the loop will be displayed.
- Use ▲ (UP) and ▼ (DOWN) keys to select the address of the module to be tested.
- To enable the selected sounder, press **ENTER** (an 'X' will appear on the right).
- To disable the sounder, press **ENTER** again (the 'X' on the right will disappear).
- To exit test mode and go back to TEST menu press ESC key.

Test - DISPLAY

Go to **LEVEL 2 MENU > TEST > DISPLAY**

- A vertical bar will start displaying from the left side of the graphic display and will switch on all the pixels of the display.
- At the same time, the display backlight will change colour every second in sequential mode.
- To exit test mode and go back to TEST menu press ESC key.

Test - LED

Go to **LEVEL 2 MENU > TEST > LED**

- The LEDs on the panel front cover will switch on for 2 seconds all at the same time.
- The panel will return to TEST menu after 2 seconds automatically.

Test - BUZZER

Go to **LEVEL 2 MENU > TEST > BUZZER**

- The panel buzzer will be enabled for 5 seconds.
- The panel will return to TEST menu after 5 seconds automatically.

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Product specifications and details as described above do not bind the manufacturer and may be altered without prior notice.

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